

October 24, 1958

Mr. Eugene Nester
Department of Microbiology
Western Reserve School of Medicine
Cleveland 6, Ohio

Dear Mr. Nester:

I saw Dale Kaiser yesterday and had a chance to talk over the DNA-transduction problem with him. His studies are confined to the Gal- system and he has made no attempt to extend them to other markers. His system requires the addition of intact as 'helping phage', and this may prove to be the key to solving the problem in E. coli generally. If he is right, DNA does enter without too much trouble and the problem is that of 'incorporation'.

The approach I suggest is to use a coli-Salmonella hybrid carrying the receptor for phage P22. This will be used as a 'helping phage' for DNA obtained from marked P22 or from the bacteria. The point of using P22 is that it mediates a generalized transduction in Salmonella, and is a far better phage than any of the coli phages applicable to the problem.

It may be possible alternatively to introduce DNA contemporaneously with the incorporation of a 'mating' chromosome.

You might advantageously mention this information as part of your program. Dr. Kaiser (who will be Asst. Professor of Biochemistry) will be very happy to see this aspect of the work go on and there would be no harm in mentioning his nearby presence.

Good luck,

Joshua Lederberg
Professor of Medical Genetics

JL/jp